

DEPARTMENT of ENVIRONMENTAL SERVICES  
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: MITCHELL POND	Lake Area (ha): 5.87
Town: WINDHAM	Maximum depth (m): 4.2
County: Rockingham	Mean depth (m): 2.1
River Basin: Merrimack	Volume (m <sup>3</sup> ): 120500
Latitude: 42°50'02" N	Relative depth: 1.6
Longitude: 71°16'29" W	Shore configuration: 1.18
Elevation (ft): 250	Areal water load (m/yr): 17.52
Shore length (m): 1010	Flushing rate (yr <sup>-1</sup> ): 8.50
Watershed area (ha): 214.3	P retention coeff.: 0.49
% watershed ponded: 0.0	Lake type: natural

BIOLOGICAL:

		5 February 1996	31 July 1995
DOM. PHYTOPLANKTON (% TOTAL)	#1	SPARSE - NO DOMINANT	CERATIUM 95%
	#2		
	#3		
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			3.84
DOM. ZOOPLANKTON (% TOTAL)	#1	NAUPLIUS LARVA 48%	NAUPLIUS LARVA 37%
	#2	KERATELLA 24%	VORTICELLA 21%
	#3	CALANOID COPEPOD 15%	KERATELLA 19%
ROTIFERS/LITER		19	93
MICROCRUSTACEA/LITER		48	143
ZOOPLANKTON ABUNDANCE (#/L)		67	299
VASCULAR PLANT ABUNDANCE			Common/Abun
SECCHI DISK TRANSPARENCY (m)			3.0
BOTTOM DISSOLVED OXYGEN (mg/L)		1.3	0.2
BACTERIA (E. coli, #/100 ml)	#1		2
	#2		2
	#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 2.4  
Hypolimnion volume (m<sup>3</sup>): None  
Anoxic volume (m<sup>3</sup>): 3400

**CHEMICAL:**

Lake: MITCHELL POND  
Town: WINDHAM

	5 February 1996		31 July 1995		
DEPTH (m)	1.0	3.0	1.0		3.0
pH (units)	6.1	6.2	7.1		6.7
A.N.C. (Alkalinity)	8.2	18.5	17.7		17.2
NITRATE NITROGEN	0.15	0.14	< 0.10		< 0.10
TOTAL KJELDAHL NITROGEN	0.20	0.50	0.51		0.64
TOTAL PHOSPHORUS	0.015	0.020	0.012		0.025
CONDUCTIVITY ( $\mu$ mhos/cm)	102.5	216.0	159.9		161.8
APPARENT COLOR (cpu)	40	70	70		60
MAGNESIUM			1.28		
CALCIUM			9.5		
SODIUM			15.7		
POTASSIUM			2.33		
CHLORIDE	17	45	34		35
SULFATE			7		8
TN : TP	23	32	43		26
CALCITE SATURATION INDEX			2.0		

All results in mg/L unless indicated otherwise

**TROPHIC CLASSIFICATION: 1995**

D.O. S.D. PLANT CHL TOTAL CLASS

**	3	4	0	7	Meso.
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**COMMENTS:**

1. No public access; pond was accessed via a 1.25 mile hike down an OHRV trail (old railroad bed) that was gated to vehicles. The launch into the pond is steep and into a very marshy area near the outlet.
2. A partial survey of the pond was conducted in 1976 on foot. A surface, shoreline sample was collected.
3. This is a tea-colored pond with substantial wetland areas around the pond. Sodium and chloride ( and conductivity) values suggest runoff from salted highways despite the pond's remoteness. Tributaries to the pond drain Interstate 93.

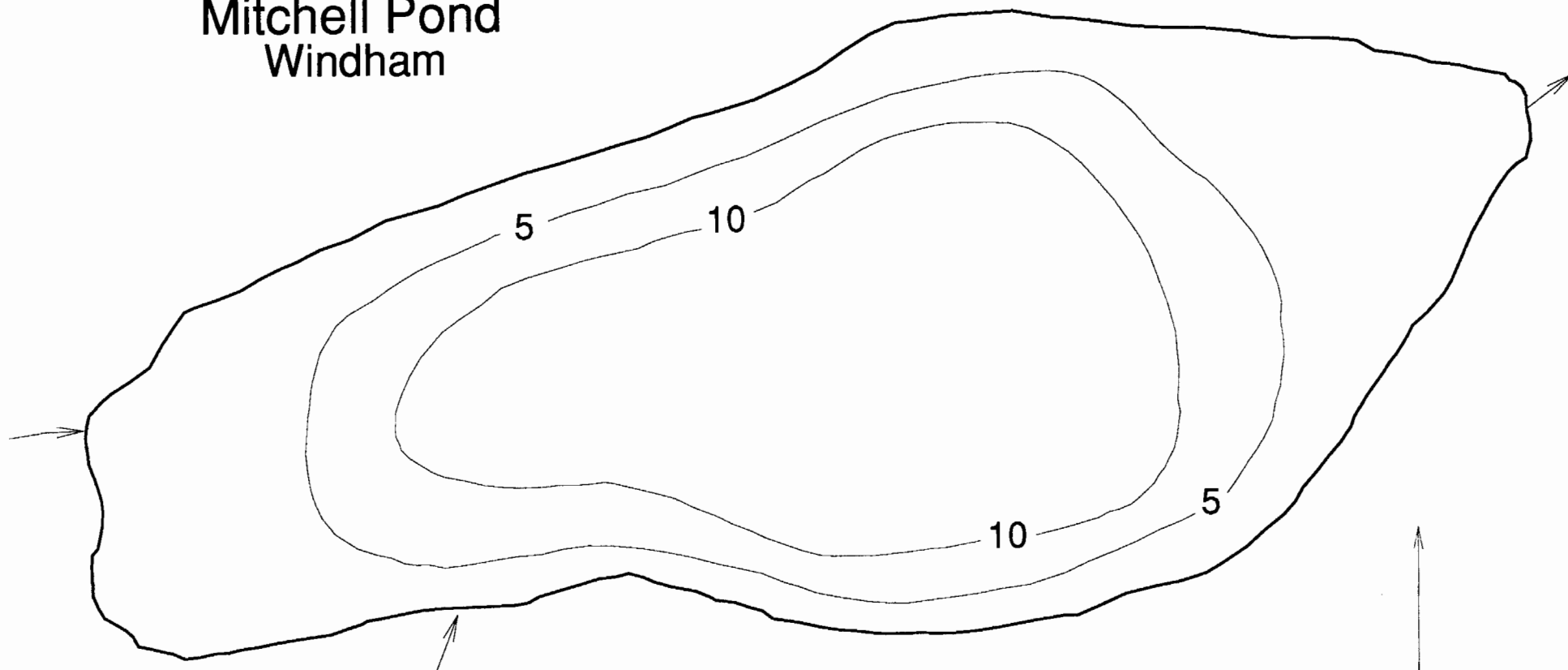
# Mitchell Pond Windham

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5 foot depth contours

0 0.1  
km

N

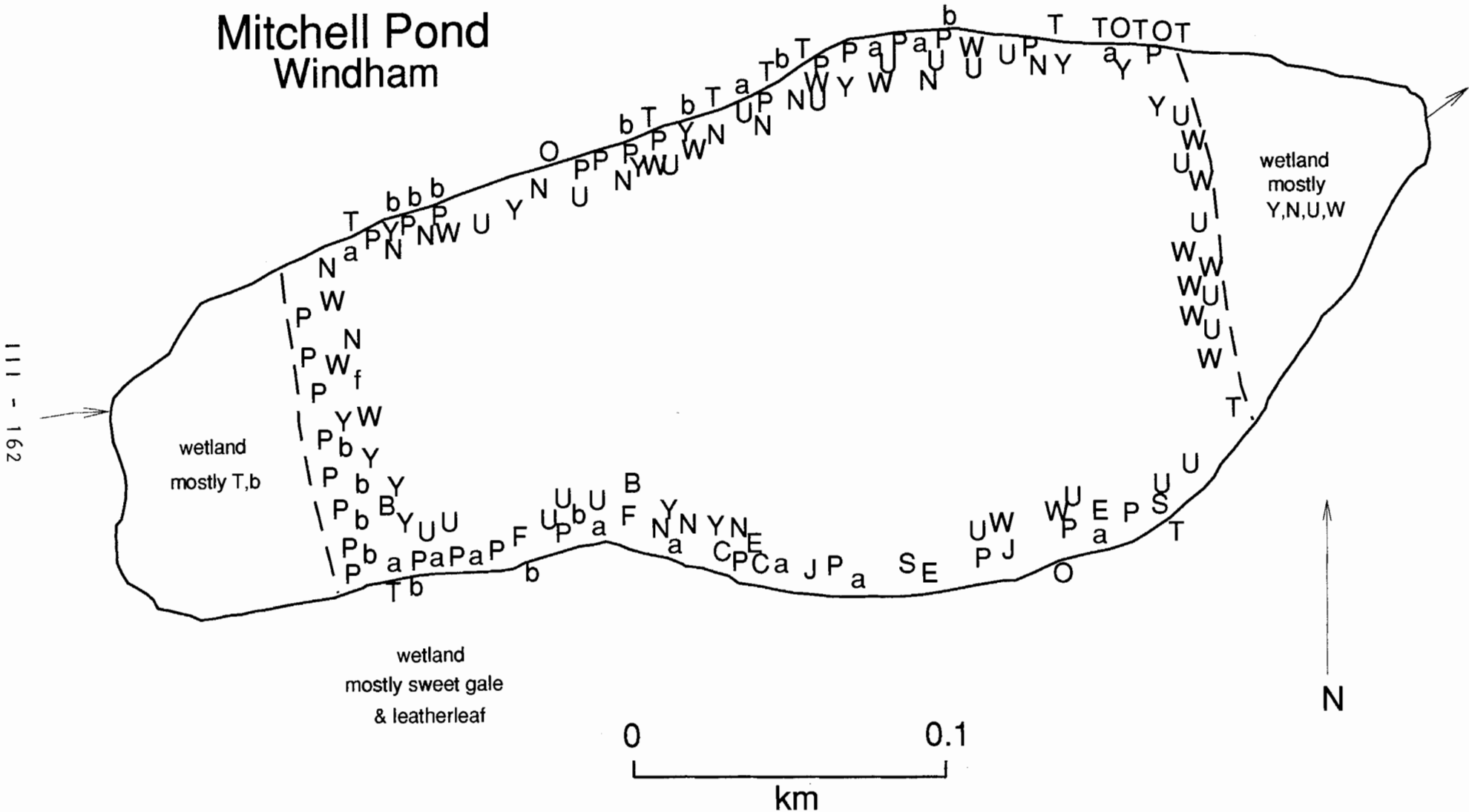


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**COMMENTS :**

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# Mitchell Pond Windham



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